Montana Department of Natural Resources and Conservation
Water Resources Division
Water Rights Bureau

ENVIRONMENTAL ASSESSMENT
For Routine Actions with Limited Environmental Impact

Part I. Proposed Action Description

1. Applicant/Contact name and address: Jan Cole Trust
   6772 Running Colors Ave
   Las Vegas, NV 89131

2. Type of action: Application for Beneficial Water Use Permit No. 42M-30028812

3. Water source name: Fourmile Creek

4. Location affected by project: NESWSW, Section 24, T25N, R59E, Richland County

5. Narrative summary of the proposed project, purpose, action to be taken, and benefits:
   This project is to construct a 22.4 acre-foot reservoir on Fourmile Creek. Water will be pumped out of the reservoir at a flow rate of 500 gpm to irrigate 14 acres. The reservoir will also be used for stock water. The point of diversion is located in the NESWSW of Section 24, T25N, R59E, Richland County. The place of use is 14 acres in the SWSW of Section 24, T25N, R59E, Richland County. The applicant is requesting 0.3 acre-feet per year for stockwater and 47.3 acre-feet per year for irrigation, which includes evaporative losses from the reservoir. The total volume is 47.6 acre-feet. The period of use for stockwater is January 1 – December 31 and the period of use for irrigation is April 1 – October 15. The applicant will benefit by increased hay production, maintenance of their shelterbelt, and water for their stock.

   The DNRC shall issue a water use permit if an applicant proves the criteria in 85-2-311 MCA are met.

6. Agencies consulted during preparation of the Environmental Assessment:
   (include agencies with overlapping jurisdiction)

   NRCS Web Soil Survey - Website
   Montana Natural Heritage Program
   Montana Department of Environmental Quality Website (TMDL 303d Listing)
   Montana State Historic Preservation Office (SHPO)
   Montana Department of Fish, Wildlife & Parks Website
   National Wetland Inventory - Website

Part II. Environmental Review

1. Environmental Impact Checklist:

PHYSICAL ENVIRONMENT

WATER QUANTITY, QUALITY AND DISTRIBUTION

Water quantity *- Assess whether the source of supply is identified as a chronically or periodically dewatered stream by DFWP. Assess whether the proposed use will worsen the already dewatered condition.*

Determination: Fourmile Creek is not identified as a chronically or periodically dewatered stream by the Montana Department of Fish, Wildlife & Parks.

Water quality *- Assess whether the stream is listed as water quality impaired or threatened by DEQ, and whether the proposed project will affect water quality.*

Determination: Fourmile Creek is listed on the 2006 Montana 303(d) list as not supporting recreation and partially supporting aquatic life and warm water fishery. The probable sources for the impairment are unknown. The applicant has applied for a joint a Joint Application for Proposed Work in Montana's Streams, Wetlands, Floodplains, and Other Water Bodies 310/404 permit from the Richland County Conservation District to develop the dam.

Groundwater *- Assess if the proposed project impacts ground water quality or supply. If this is a groundwater appropriation, assess if it could impact adjacent surface water flows.*

Determination: This surface water appropriation should have no significant impact on groundwater in the area.

DIVERSION WORKS *- Assess whether the means of diversion, construction and operation of the appropriation works of the proposed project will impact any of the following: channel impacts, flow modifications, barriers, riparian areas, dams, well construction.*

Determination: The diversion will consist of a dam with a pump as a secondary means of diversion. The dam will be approximately 300 feet long with a crest width of 10 feet. The dam will impound 22.4 acre-feet of water with a surface area of approximately 7 acres and a maximum depth of 8 feet. The primary spillway will consist of an 18 inch steel gated pipe with a riser set at 8 feet. The reservoir will also have an emergency spillway cut around the north end of the dam. A secondary means of diversion will consist of a Gould pump, model CC ENDSUCT C, 10BF. Water will be pumped through an 8 inch mainline to supply sprinkler and furrow irrigation. The construction of the dam across Fourmile Creek will modify the channel and flow pattern of the creek, however, once filled, water will flow through the reservoir via the primary spillway. Based on North Dakota aerial photos of the creek it is apparent that the stream channel east of the state line has been extensively altered to accommodate farming of the fields. There are virtually no meanders and in many reaches the channel resembles a straight line ditch. There is also extensive irrigation on the North Dakota side of the border but it is unknown if water from Fourmile Creek is a source for the irrigation. While there will be impacts to channel and riparian areas with the construction of the dam, these impacts are not considered significant.

UNIQUE, ENDANGERED, FRAGILE OR LIMITED ENVIRONMENTAL RESOURCES

Endangered and threatened species *- Assess whether the proposed project will impact any threatened or endangered fish, wildlife, plants or aquatic species or any "species of special concern," or create a barrier to the migration or movement of fish or wildlife. For groundwater, assess whether the proposed project, including impacts on adjacent surface flows, would impact any threatened or endangered species or "species of special concern."*

Determination: According to a report from the Montana Natural Heritage Program (MNHP) there are no species of special concern in the general project area. Fourmile Creek is a prairie stream and is classified as a non-trout stream by the Montana Department of Fish, Wildlife & Parks. The predominant fish species present in Fourmile Creek are the brook stickleback, creek chub, fathead minnow and the white sucker, all non-game species. The Montana Department of Fish, Wildlife & Parks did not apply for instream flow protection for Fourmile Creek. Based on North Dakota aerial photos of the creek it is apparent that the stream channel east of the state line has been extensively altered to accommodate farming of the fields. There are virtually no meanders and in many reaches the channel resembles a straight line ditch. There is also extensive irrigation on the North Dakota side of the border but it is unknown if water from Fourmile Creek is a source for the irrigation. It is also unknown what impact, if any, the alteration of the stream channel has already had on the fish populations. The construction of the proposed dam will create a barrier to the upstream migration of the fish, however should not create a significant impact.

Wetlands *- Consult and assess whether the apparent wetland is a functional wetland (according to COE definitions), and whether the wetland resource would be impacted.*

Determination: According to the National Wetland Inventory there is one small palustrine wetland to the east (downstream) of the proposed dam location. This wetland is immediately downstream from the Lower Yellowstone Irrigation District's main canal siphon and was created by overflows from the main canal. The proposed dam would be located approximately 60 feet upstream of the siphon and should have no significant impact on the wetland.

Ponds *- For ponds, consult and assess whether existing wildlife, waterfowl, or fisheries resources would be impacted.*

Determination: The construction of the proposed dam will create a barrier to fish migration, as previously discussed, however the reservoir may enhance the habitat for wildlife and waterfowl. No significant impacts are anticipated.

GEOLOGY/SOIL QUALITY, STABILITY AND MOISTURE *- Assess whether there will be degradation of soil quality, alteration of soil stability, or moisture content. Assess whether the soils are heavy in salts that could cause saline seep.*

Determination: According to the NRCS Web Soil Survey and the Richland County Soil Survey the soils at the proposed reservoir location are a mixture of Cherry, Havrelon and Trembles. Cherry soils are a silty clay loam, Havrelon is a silt loam and Trembles are a fine sandy loam. These are nearly level and gently sloping soils on low terraces and flood plains in narrow valleys of intermittent streams. Runoff is slow and the hazard of erosion is high due to occasional

stream overflow. The soils have a seepage rating of 0.05 – 0.7. Gradations for the numeric ratings are no limitation (0.00) to the greatest negative impact (1.00). The rating indicates that, depending on the particular mix of the soil types, the soils rate as "not limited" to "somewhat limited" for the purpose of dam construction.

According to the NRCS Web Soil Survey and the Richland County Soil Survey the soils at the proposed place of use for irrigation are Havrelon silt loam. This is a deep, well drained, nearly level soil on low terraces and flood plains. Permeability is moderate and available water capacity is high. Runoff is very slow to slow and the hazard of erosion is none to slight. These soils are suitable for both dryland and irrigated crops.

VEGETATION COVER, QUANTITY AND QUALITY/NOXIOUS WEEDS - *Assess impacts to existing vegetative cover. Assess whether the proposed project would result in the establishment or spread of noxious weeds.*

Determination: According to aerial photos the acres to be irrigated are currently being dryland farmed. The shelterbelt to be irrigated has also been established. Vegetative cover will be lost during the construction of the dam and the emergency spillway. These areas will be re-seeded to native grasses. The control of noxious weeds is the responsibility of the property owner.

AIR QUALITY - *Assess whether there will be a deterioration of air quality or adverse effects on vegetation due to increased air pollutants.*

Determination: There will be no significant impact to air quality as a result of this appropriation.

HISTORICAL AND ARCHEOLOGICAL SITES - *Assess whether there will be degradation of unique archeological or historical sites in the vicinity of the proposed project.*

Determination: According to the Montana State Historic Preservation Office (SHPO), there is only one previously recorded cultural site within the project area, the Lower Yellowstone Irrigation District's main canal. SHPO feels, as long as there will be no disturbance or alteration of the main canal, there is a low likelihood that cultural properties will be impacted and that a cultural resource inventory is unwarranted at this time. The project is located on private property and any inventory that might be conducted in the future would be at the property owner's discretion.

DEMANDS ON ENVIRONMENTAL RESOURCES OF LAND, WATER, AND ENERGY - *Assess any other impacts on environmental resources of land, water and energy not already addressed.*

Determination: No additional impacts on other environmental resources were identified.

HUMAN ENVIRONMENT

LOCALLY ADOPTED ENVIRONMENTAL PLANS AND GOALS - *Assess whether the proposed project is inconsistent with any locally adopted environmental plans and goals.*

Determination: There are no known local environmental plans or goals in this area.

ACCESS TO AND QUALITY OF RECREATIONAL AND WILDERNESS ACTIVITIES - *Assess whether the proposed project will impact access to or the quality of recreational and wilderness activities.*

Determination: This project will have no significant impact on recreational or wilderness activities.

HUMAN HEALTH - *Assess whether the proposed project impacts on human health.*

Determination: This project will have no significant impact on human health.

PRIVATE PROPERTY - *Assess whether there are any government regulatory impacts on private property rights.*
*Yes___ No_**X**__ If yes, analyze any alternatives considered that could reduce, minimize, or eliminate the regulation of private property rights.*

Determination: There are no additional government regulatory impacts on private property rights associated with this application.

OTHER HUMAN ENVIRONMENTAL ISSUES - *For routine actions of limited environmental impact, the following may be addressed in a checklist fashion.*

Impacts on:

(a) *Cultural uniqueness and diversity?* No significant impact.

(b) *Local and state tax base and tax revenues?* No significant impact.

(c) *Existing land uses?* No significant impact.

(d) *Quantity and distribution of employment?* No significant impact.

(e) *Distribution and density of population and housing?* No significant impact.

(f) *Demands for government services?* No significant impact.

(g) *Industrial and commercial activity?* No significant impact.

(h) *Utilities?* No significant impact.

(i) *Transportation?* No significant impact.

(j) *Safety?* No significant impact.

(k) *Other appropriate social and economic circumstances?* No significant impact.

2. *Secondary and cumulative impacts on the physical environment and human population:*

Secondary Impacts: No secondary impacts have been identified.

Cumulative Impacts: No cumulative impacts have been identified.

3. ***Describe any mitigation/stipulation measures:*** None at this time.

4. ***Description and analysis of reasonable alternatives to the proposed action, including the no action alternative, if an alternative is reasonably available and prudent to consider:*** Under the no action alternative, the applicant would not have the benefit of the increased productivity that irrigation water would provide to 14 acres of hay land and shelterbelt. The applicant would continue for farm the ground as they have in the past. Stock water would be limited to instream stock use or be provided by well water.

PART III. Conclusion

1. ***Preferred Alternative:*** Issue a water use permit if the applicant proves the criteria in 85-2-311, MCA are met.

2 ***Comments and Responses***

3. ***Finding:***
Based on the significance criteria evaluated in this EA, is an EIS required? No

If an EIS is not required, explain why the EA is the appropriate level of analysis for this proposed action: No significant impacts have been identified, therefore an EIS is not necessary.

Name of person(s) responsible for preparation of EA:

Name: Denise Biggar
Title: Water Resource Specialist
Date: November 27, 2007